

APPENDIX K
FIRE PREVENTION AND PROTECTION

1. Purpose. This appendix defines the policy of the District Engineer for the maintenance and administration of a comprehensive fire prevention and protection program. This includes building evacuation procedures for the District Office and guidance for all Buffalo District facilities to develop their own site specific plans. Each facility shall have a written, dated emergency evacuation plan and a written dated fire prevention plan to minimize the risks of fire and other emergencies. Basic fire prevention and protection for construction activities will comply with 29 CFR 1910.38, EM 385-1-1, NFPA and applicable local and state codes.

2. References.

- a. 29 CFR 1910.38
- b. AR 385 Series
- c. ER 385-1-1
- d. EM 385-1-1
- e. National Fire Protection Association Codes

3. Policy.

a. The Safety and Occupational Health Office shall conduct inspections which address life safety and fire protection at least annually of all district facilities.

b. Unless OSHA and NFPA requirements for fire brigades are met, the only building fires which should be fought by Corps employees are small fires which can be put out by fire extinguishers.

c. Managers of facilities in remote locations shall establish, if possible, Memorandums of Understanding with local fire departments for fighting fires. The fire department shall be provided inventories of all hazardous material in the

facility, a map showing storage locations, and shall be walked through the facility so they understand the layout and dangers prior to the fire.

d. Evacuation and fire prevention plans shall be reviewed annually and updated as needed. Applicable plans shall be provided to and reviewed with contractors.

e. Facilities, which do not meet safety and fire requirements, shall be expeditiously corrected. All deficiencies shall be reviewed annually and reported to SOHO until corrected.

f. The SOH Office will be notified by phone within 24 hours of any fire. A report of all fires will be sent to the SOHO within 5 days of a fire.

4. General Building and Structure Requirements:

a. In every building or structure, exits shall be so arranged and maintained as to provide free and unobstructed egress from all parts of the building or structure at all times of occupancy. No lock or fastener shall be installed to prevent free escape from the inside of any building.

b. Every exit shall be clearly visible, or the route to reach it shall be conspicuously marked in such a manner that every occupant of every building or structure who is physically and mentally capable will readily know the direction of escape from any point. Each means of egress, in its entirety, shall be so arranged or marked that the way to a place of safety is indicated in a clear manner. Any doorway or passageway that is not an exit, but could possibly be thought of as an exit, shall be so arranged or marked to prevent occupant confusion with actual fire exits. Every effort shall be taken to avoid occupants mistakenly traveling into dead-end spaces during a fire emergency.

c. Two means of egress, as a minimum, shall be provided in every building or structure, section, or area where the size, occupancy, and arrangement endangers occupants attempting to use a single means of egress that is blocked by fire or smoke. The two means of egress shall be arranged to minimize the possibility that both may be impassable by the same fire or emergency condition.

d. Where hazardous processes or storage are of such character as to introduce an explosion potential, explosion

venting or an explosion suppression system specifically designed for the hazard involved shall be provided.

e. Clearance shall be maintained around lights and heating units to prevent ignition of combustible materials.

5. Housekeeping.

a. Scrap lumber, shavings, paper, crating materials, paper packing boxes, and similar combustibles shall be cleared from buildings daily and work areas shall be maintained free from accumulations of combustible debris.

b. All entrances, fire exits, stairs, halls, and passageways shall allow free, unrestricted passage at all times. No material or equipment of any type shall ever be placed or stored to block or restrict free access and egress.

c. Combustible cleaning materials shall be stored in closed metal containers. No combustible materials shall be stored beneath or stacked within 10 feet of buildings.

d. All rags, waste, etc. soiled by flammable or combustible materials shall be placed in tight or closed metal containers for daily disposal.

6. Burning Areas.

a. All burning areas shall be established after coordination with the designated authority and in compliance with Federal, State, and local regulations and guidelines.

b. A sufficient force to control and patrol the burning operations shall be maintained until the last embers have been extinguished. Fires and open flame devices shall not be left unattended.

7. Other.

a. Smoking is not permitted in any Buffalo District Corps of Engineers facility, except designated smoking rooms.

b. All electrical installations shall be accomplished in accordance with the current edition of the National Electrical Codes.

c. Emergency telephone numbers and reporting instructions shall be conspicuously posted.

8. Fire Protection.

a. Supervisory personnel are responsible for recharging and servicing the equipment once each year and/or as needed and for making visual inspections for signs of leaks or other defects once each month. Record tags will be attached to all extinguishers and the dates they were inspected and weighed or recharged will be indicated thereon.

b. Adequately approved first aid fire fighting appliances will be provided at temporary buildings and places where combustible materials are stored on any site as follows:

(1) Class A fire (wood, paper, textiles, rubbish, etc.)
-- Water or foam extinguisher.

(2) Class B fire (Oil, grease, gasoline, and similar flammable materials) -- Foam, carbon dioxide, or dry-chemical extinguishers.

(3) Class C fire (Electrical) -- Carbon Dioxide or dry-chemical extinguisher.

(4) The use of carbon tetrachloride or chlorobromomethane as a fire extinguishing agent is prohibited.

c. Class B fire extinguishers will be provided on all draglines and trucks transporting flammable liquids and at fuel storage tanks and pumps, asphalt mix plants, tar kettles, and at sites where arc or gas welding or cutting is being performed.

d. Where unusual fire hazards exist or emergencies develop, additional fire fighting facilities, such as larger portable chemical units, fire pumps, fire hoses, outside assistance, etc., shall be developed as necessary to assure reasonable protection.

9. Fire Extinguisher Equipment for all Motorboats.

a. The requirements for fire extinguisher equipment are applicable to all launches and motorboats regardless of construction. All motorboats 26 feet or longer will be inspected by the Commanders authorized representative with such assistance as may be required of the Marine Inspection Service, U.S. Coast

Guard. Such inspection requirements will be documented as necessary and displayed aboard each vessel.

b. The chiefs of all field units, survey parties are responsible for compliance with these regulations and for requisitioning initial and/or replacement of fire extinguishers in accordance with existing contracting procedures.

c. The minimum approved type equipment to be carried on each motorboat shall be one of the following types:

(1) FSN 4210-965-1105 Extinguisher, Fire, Dry-Chemical - 2 1/2 lb. capacity. 10 to 20 B:C.

(2) FSN 4210-595-1777 Extinguisher, Fire, Carbon Dioxide, 5 lb. capacity. 1 to 5 B:C.

10. Evacuation Plan. The plan shall include the following:

a. Responses to fire alarms, fire systems supervisory alarms and fire extinguishing system activation.

b. Notification procedures - fire department, supervisors, district, division etc. Include phone numbers.

c. Evacuation routes to include designation of safe locations outside of facility where employees would wait for further instructions.

d. Fire extinguishment activities.

e. Emergency escape procedures and escape route assignments.

f. Procedures to verify that detector activations are fires or false alarms.

g. Procedures to account for all employees after evacuations have taken place.

h. Procedures to account for all employees who remain to operate critical plant equipment before they evacuate.

i. Rescue and medical duties for those employees who are to perform them.

j. The handling of tour groups, visitors or personnel not normally in the facility.

k. Fire reporting procedures, accident investigation procedures.

l. Drill requirements, to include evacuation, rescue operations, etc.

m. Responsible employees who can provide further information or explanation of duties under the plan.

n. Signature cover sheet with facility head signature, next higher supervisor signature and the District Facility Manager signature signifying review and acceptance of plan. Plans should be reviewed for completeness and for consistency throughout the district.

11. Fire Prevention Plans.

a. A written fire prevention plan shall be available for each facility. The plan shall include:

(1) A list of major work-place fire hazards.

(2) Storage and handling procedures for fire hazards to include general housekeeping and procedures for the control of flammables and combustibles.

(3) Potential ignition sources and control procedures, to include smoking, cutting, grinding, welding, etc.

(4) Listing of fire protection equipment and written procedures for use.

(5) Documented plant inspections by plant personnel, district, division, safety, fire protection, maintenance, etc.

(6) Standard Operating Procedures (SOPs) for specific maintenance operations, which present unique fire hazards such as cavitation and confined space work.

(7) Names and job title of personnel responsible for maintenance of fire equipment and those responsible for fire hazards.

- (8) Required maintenance and testing procedures and frequency for all fire equipment and systems e.g. CO2 systems, detectors, alarm systems, etc.
 - (9) A report of all fires experienced by the facility.
 - (10) Copies of any signed memorandums of understanding for fire fighting assistance.
 - (11) Information on fires in similar facilities or other fire prevention information which would be of interest and educate employees regarding fire prevention or protection.
 - (12) Signature cover sheet with facility head signature, next higher supervisor signature and the District Facility Manager signature. These plans should also be reviewed for completeness and consistency throughout the district annually.
- b. All employees shall be informed of the fire hazards of materials and processes to which they are exposed. Employees shall sign that they have read the above plans and that the above plans have been reviewed with them. Signature sheets shall be kept with the plans at the facility.